

### In the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A method of time scale modification of a digital audio signal comprising the steps of:  
analyzing an input signal in a set of first equally spaced, overlapping time windows having a first overlap amount  $S_s$ ;  
selecting a base overlap  $S_s$  for output synthesis corresponding to a desired time scale modification;  
calculating a cross-correlation  $R[k]$  for index value  $k$  between overlapping frames for a range of overlaps between  $S_s + k_{min}$  to  $S_s + k_{max}$  according to

$$R[k] = \frac{\sum_{i=0}^{L_k-1} \{y[mS_s + i + k] \gg m\} \cdot \{x[mS_s + i] \gg m\}}{M_k}$$

where:  $L_k$  is the overlap length;  $x[i]$  is the analysis of the input signal for index value  $i$ ;  $y[i]$  is a synthesis signal for the index value  $i$ ;  $m$  is a constant between 10 and 15; and  $M_k$  is a measure proportional to overlap length;

selecting a value  $K$  yielding the greatest cross-correlation value  $R[k]$ ;

synthesizing an output signal in a set of second equally spaced, overlapping time windows having a second overlap amount equal to  $S_s + K$ .

2. (Original) The method of claim 1, wherein:  
the measure proportional to the overlap length  $M_k$  is  $L_k/2$ .

3. (Original) The method of claim 1, wherein:  
the shift amount m is 12.

4. (Original) The method of claim 1, wherein:  
said step of calculating the cross-correlation R[k] employs  
only a center half of the overlap region for k = 0.

5. (Currently Amended) A digital audio apparatus comprising:  
a source of a digital audio signal;  
a digital signal processor connected to said source of a  
digital audio signal programmed to perform time scale modification  
on the digital audio signal by

analyzing an input signal in a set of first equally  
spaced, overlapping time windows having a first overlap amount  
 $S_a$ ,

selecting a base overlap  $S_s$  for output synthesis  
corresponding to a desired time scale modification,

calculating a cross-correlation R[k] for index value k  
between overlapping frames for a range of overlaps between  
 $S_s + k_{min}$  to  $S_s + k_{max}$  according to

$$R[k] = \frac{\sum_{i=0}^{L_k-1} \{y[mS_s + i + k] \gg m\} \cdot \{x[mS_s + i] \gg m\}}{M_k}$$

where:  $L_k$  is the overlap length;  $x[i]$  is the analysis of the  
input signal for index value i;  $y[i]$  is a synthesis signal for  
the index value i; m is a constant between 10 and 15; and  $M_k$   
is a measure proportional to overlap length;

selecting a value K yielding the greatest cross-  
correlation value R[k],

23 synthesizing an output signal in a set of second equally  
24 spaced, overlapping time windows having a second overlap  
25 amount equal to  $S_s + K$ ; and  
26 an output device connected to the digital signal processor for  
27 outputting the time scale modified digital audio signal.

1 6. (Original) The digital audio apparatus of claim 5,  
2 wherein:  
3 the measure proportional to the overlap length  $M_k$  is  $L_k/2$ .

1 7. (Original) The digital audio apparatus of claim 5,  
2 wherein:  
3 the shift amount  $m$  is 12.

1 8. (Original) The digital audio apparatus of claim 5,  
2 wherein:  
3 said digital signal processor is programmed to calculate the  
4 cross-correlation employing only a center half of the overlap  
5 region for  $k = 0$ .